

## REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 1-17 were pending in this application. Claims 1 and 9 have been amended, claims 2, 10, and 11 have been canceled without prejudice and claims 18 and 19 have been newly added. Accordingly, claims 1, 3-9, and 12-19 will be pending herein upon entry of this Amendment, of which claims 1 and 9 are independent claims. The support for the amended claims can be found throughout the specification, drawings and claims of the original application, and no new matter is introduced. For the reasons stated below, Applicant respectfully submits that all claims pending in this application are in condition for allowance.

In the Office Action, claims 1-2 and 9-11 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,396,253 to Chia ("Chia") and claims 3-8 and 12-17 were indicated to be allowable if rewritten in independent form including all of the limitations of the basis claim and any intervening claims. To the extent this rejection might still be applied to claims presently pending in this application, it is respectfully traversed.

Amended claim 1 recites, among other things, (F) selecting one of said first speed and said second speed to be said movement speed; and (G) selecting said second speed as said movement speed if said first speed is slower than a predetermined speed.

Amended claim 9 recites, among other things, that first filter unit for filtering said signal to generate a first signal, said first filter unit having a first cut-off frequency, said first

filter unit corresponding to a first speed zone, a second filter unit for filtering said signal to generate a second signal, said second filter unit having a second cut-off frequency, said second filter unit corresponding to a second speed zone, a predetermined speed being located between a lower edge of the first of the first speed zone and a higher edge of the second speed zone; and a selecting unit for selecting said second speed as said movement speed if said first speed is slower than said determined speed.

Chia fails to teach or suggest the features recited in amended claims 1 and 9. Chia describes a method of speed estimation by using time windows as filters. The time windows are various time periods and the function of the time windows is to average the amplitude of the signals in one time period. The output from each time window is input into the variance calculator 28 for calculating the variance, and then the speed decision logic 30 selects the corresponding speed according to the table illustrated in Column 5 of Chia.

However, regarding Claim 1, the method disclosed in the present invention comprises obtaining a first speed and a second speed by estimating the speed based on the first and the second signals respectively, and then selecting one speed by comparing the first and second speeds. The present invention selects the second speed to be the movement speed while the first speed is slower than a predetermined speed, i.e. the first speed is selected to be the movement speed while the first speed is faster than the predetermined speed. For example, as shown in Fig. 4 of the present invention, the first filter corresponds to the range of 20~250km/hr, the second filter corresponds to the range of 60~120km/hr, and the predetermined speed =120 km/hr. Curves A', B', C' and D' respectively represent the performances of using the filter units with the cut-off

frequencies of 375 Hz, 250 Hz, 125Hz, and 62.5 Hz. When the mobile unit moves below a specific speed, one mean of correlation coefficient value may map two distinct speeds in curve A', which prevents the system from determining the correct movement speed of the mobile unit. Therefore, the present invention defines a T zone, which is a common zone of curve A' and B'. The minimum of the T zone is defined by the lowest point "a" of the curve A' after bent. The maximum of the T zone is defined by the correlation coefficient mean "b" corresponding to the cut-off frequency of curve B'. When the movement speed falls into the T zone, the present invention selects the speed estimated according to curve B' to be the movement speed of the mobile unit. The present invention further obtains a first predetermined speed based on the T zone. In other words, the present invention selects curve B' when the mobile unit moves below the first predetermined speed. In a word, the present invention divides the estimated speed into different zones and selects one of the zones as the movement speed, rather than selects the speed according to a table of Chia reference.

Moreover, the filter of Chia is a time window to filter out the faster and slower speed by averaging the signals, which is totally different from the filter recited in Claims 1 and 9 of the present invention. The filter of the present invention has a cut-off frequency, but the filter of Chia is a period of time without cut-off frequency.

Furthermore, the first and second speeds of the present invention are obtained according to the Doppler frequency. On the contrary, Chia states in Column 1 that the speed estimated by Doppler shift is expensive and impracticable. Apparently, the technical methods between Chia and the present invention are different. Therefore, Claims 1 and 9 are patentable over Chia.

Therefore, Applicant respectfully submits that Chia fails to teach or suggest that estimating the speed of a mobile unit comprises obtaining speeds based on the signals filtered by the filters and selecting one of the speeds based on the comparison between the speeds. In other words, amended claims 1 and 9 are not anticipated by Chia.

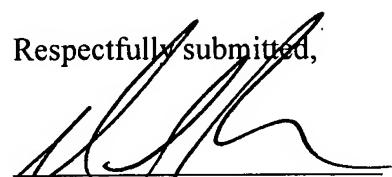
Accordingly, Applicant respectfully submits that independent Claims 1 and 9 are allowable over Chia. In addition, claims 2-8, 10-17, which directly or indirectly depend on patentable independent claims 1 and 9 and further limit the scope, are believed also to be patentable.

In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone Applicant's undersigned representative at the number listed below.

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